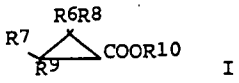
26 G16—G7

G3 = O
G4 = G5
G5 = (2-4) CH2 (opt. substd. by G14)
G7 = Ph (opt. substd. by (1-3) G13)
G13 = halo
G14 = alkyl <containing 1-4 C>
G16 = alkylene <containing 1-2 C>
Patent location: claim 1

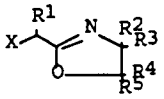
L47 ANSWER 4 OF 13 MARPAT COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 127:17671 MARPAT Full-text
TITLE: Preparation of cyclopropanecarboxylic acid derivatives using oxazolines as asymmetric ligands
INVENTOR(S): Ikehira, Hideyuki
PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| JP 09087258 | A2 | 19970331 | JP 1995-250833 | 19950928 |

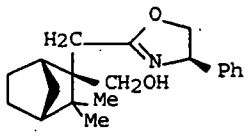
PRIORITY APPLN. INFO.: JP 1995-250833 19950928
GI



I



II



III

AB The title compds. [I; R6-R9 = H, (un)substituted alkyl, aryl, or aralkyl; R10 = (un)substituted alkyl, aryl] are prepared by addition of olefin R6CR8:R7CR9 (R6-R9 = same as above) with N2CHCO2R10 (R10 = same as above) in the presence of copper salt catalysts and oxazoline asym. ligands [II; X = 1-hydroxy-1-cycloalkyl, 1-hydroxy-1-cycloaralkyl, etc.; R1 = H, (un)substituted aryl; R2-R5 = H, (un)substituted alkyl, aryl, or aralkyl]. II are prepared from nitrile derivs. I are useful as intermediates in the production of drugs and pesticides. Thus, 2,5-dimethyl-2,4-hexadiene was reacted with N2CHCO2Et in the presence of (F3CSO3)2Cu, PhNHNH2, and oxazoline (III) (preparation given) to give 65.5% trans-1-R-ethoxycarbonyl-2-R- (2-methyl-1-propenyl)-3,3-dimethylcyclopropane 46.5% ee and 28.2% cis-1-R-ethoxycarbonyl-2-S-(2-methyl-1-propenyl)-3,3-dimethylcyclopropane 37.9% ee.